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<b>Voice Tel. No.:</b>	<b>Voice Tel. No.:</b>
<b>Fax Tel. No.:</b> 703.305.3230	<b>Sent By:</b> Teri Farley
<b>Your Ref.:</b>	<b>Our Ref.:</b> 027650-928
	<b>Total Pages (Incl. Cover Page):</b> 6

**RE:** U.S. Patent Application No. 09/830,686  
Corresponding to International Application No. PCT/JP99/05966  
"Heat-Sealing Device"  
Inventor: Keiji YANO**MESSAGE:**

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Any questions regarding compatibility should be directed to our Office Services Department at +1.703.836.6620.

(BDSM 8/00)



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**MATTHEW L. SCHNEIDER**  
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**VIA FACSIMILE**

September 7, 2001

Ms. Paulette Kidwell  
Paralegal  
U.S. Patent and Trademark Office  
Box PCT  
Washington, D.C. 20231

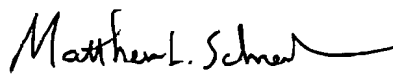
Re: U.S. Patent Application No. 09/830,686  
"Heat-Sealing Device"  
Inventor: Keiji YANO  
Our Reference: 027650-928

Dear Ms. Kidwell:

Further to our recent telephone conversation regarding U.S. Application No. 09/830,686, enclosed is a copy of the International Preliminary Examination Report issued in connection with corresponding International Application No. PCT/JP99/05966.

Should you need any other information, please feel free to call me.

Very best regards,

  
Matthew L. Schneider

MLS/tf  
Enclosure

## PATENT COOPERATION TREATY

**PCT**  
**NOTIFICATION OF TRANSMITTAL**  
**OF COPIES OF TRANSLATION**  
**OF THE INTERNATIONAL PRELIMINARY**  
**EXAMINATION REPORT**

(PCT Rule 72.2)

From the INTERNATIONAL BUREAU

To:

SHIMIZU, Shozo  
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 Intellectual Property Department  
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 JAPON

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Intellectual  
Property

Date of mailing (day/month/year) 18 May 2001 (18.05.01)	
Applicant's or agent's file reference ntp-335	<b>IMPORTANT NOTIFICATION</b>
International application No. PCT/JP99/05966	International filing date (day/month/year) 28 October 1999 (28.10.99)
Applicant TETRA LAVAL HOLDINGS & FINANCE S.A. et al	

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the International preliminary examination report established by the International Preliminary Examining Authority.

**2. Transmittal of the copy of the translation to the elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

EP, AT, AU, CA, CH, CN, CZ, FI, KP, NO, NZ, PL, RO, RU, SK, US

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AP, EA, AE, AL, AM, AZ, BA, BB, BG, BR, BY, CR, CU, DE, DK, DM, EE, ES, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, PT, SD, SE, SG, SI, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, OA

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer Eliott Peretti Telephone No. (41-22) 338.83.38
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Form PCT/IB/338 (July 1998)

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12  
**Translation**

**PATENT COOPERATION TREATY****PCT****INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference ntp-335	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP99/05966	International filing date (day/month/year) 28 October 1999 (28.10.99)	Priority date (day/month/year) 30 October 1998 (30.10.98)
International Patent Classification (IPC) or national classification and IPC B65B 51/10		
Applicant TETRA LAVAL HOLDINGS & FINANCE S.A.		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 16 March 2000 (16.03.00)	Date of completion of this report 07 December 2000 (07.12.2000)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

Form PCT/IPEA/409 (cover sheet) (July 1998)

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP99/05966

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☐ the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the claims:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP99/05966

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1-8	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-8	NO
Industrial applicability (IA)	Claims	1-8	YES
	Claims		NO

## 2. Citations and explanations

Claims 1 and 8 do not appear to involve an inventive step in view of document 1 [JP, 58-134744, A (Tetra Pak International AB), 11 August 1983 (11.08.83)] and document 2 [JP, 2-45308, A (Fuji Photo Film Co., Ltd.), 15 February 1990 (15.02.90)], both cited in the ISR. Document 1 describes a heat seal device that removes/mixes seal-obstructing impurities from the seal zone. One skilled in the art could have easily arrived at applying such a technology to the device described in document 2, wherein a tubular packing material that was formed by shaping a packing material web into a tube and has been filled with a liquid food is: (1) held from the outside between a seal jaw and an opposite jaw at a position in the seal zone of the packaging material that includes a portion to be cut and is below the liquid level of the liquid food and (2) heat sealed in the lateral direction across the tube. Furthermore, specifying liquid food as the contents to be put into the tube is merely a matter of design variation for one skilled in the art.

Claim 2 does not appear to involve an inventive step in view of documents 1, document 2, and document 3 [JP, 2-120380, A (Omori Kikai Kogyo K.K.), 8 May 1990 (08.05.90)], cited in the ISR. Document 3 describes providing an inclined surface on the working surface of the opposite jaw. One skilled in the art could have easily arrived at utilizing such a technology.

Claim 3 does not appear to involve an inventive step in view of documents 1 to 3, all cited in the ISR. Document 3 describes providing an inclined surface with a mound-shaped cross section on the working surface of the opposite jaw. One skilled in the art could have easily arrived at utilizing such a technology.

Claim 4 does not appear to involve an inventive step in view of documents 1 and 2, cited in the ISR. One skilled in the art could have accomplished making the protruding strip non-continuous.

Claim 5 does not appear to involve an inventive step in view of documents 1 and 2, cited in the ISR. The invention described in document 1, too, forms a seal region using high frequency dielectric heating, and the packing material of the invention is a laminated body having a thin metal layer and an innermost layer of a thermoplastic material.

Claim 6 does not appear to involve an inventive step in view of documents 1, document 2, and document 4 [JP, 9-323708, A (Kabushiki Kaisha Faburikato-yama), 16 December 1997 (16.12.97)], cited in the ISR. Document 4 describes forming a seal region using ultrasound heating. One skilled in the art could have easily arrived at utilizing such a technology. The packing material of the invention described in document 1, too, has a thermoplastic material in at least its innermost portion.

Claim 7 does not appear to involve an inventive step in view of claims 1 and 2, cited in the ISR. The invention described in document 1 also forms a seal region using an electrical resistor, and the packing material of the invention has a thermoplastic material in at least its innermost portion.